

CLAIMS

1. A circuit for dimming a lamp comprising:
 - first and second rectifiers;
 - first and second voltage regulators coupled to the rectifiers for providing regulated voltage outputs;
 - a first gate control circuit coupled to the first voltage regulator;
 - a delay circuit coupled to the second voltage regulator;
 - a voltage controlled oscillator coupled to the second voltage regulator and to the delay circuit;
 - first and second gate control circuits coupled respectively to the first and second voltage regulator and to the oscillator for generating gate control signals in accordance with the oscillator output; and
 - first and second pairs of gate controlled power semiconductor devices connected to the gate control circuits for supplying power to fluorescent lighting devices in accordance with the gate control signals.
2. The circuit of claim 82 wherein the first pair of gate controlled power semiconductor devices is connected in parallel with the lamp and each of the second pair of gate controlled power semiconductor devices are alternately connected across the lamp.
3. The circuit of claim 83 further comprising first and second diodes connected in series with each other with each other at their anodes and each connected across one of the first pair of gate controlled power semiconductor devices.

4. The circuit of claim 83 further wherein the second pair of gate controlled power semiconductor devices are connected together and to ground at their common connection.
5. The circuit of claim 1 wherein the delay circuit disables the voltage controlled oscillator for preset period of time.
6. The circuit of claim 1 wherein the gate controlled power semiconductor devices are selected from the group consisting of power mosfets and insulated gate bipolar transistors.
7. The circuit of claim 1 wherein the rectifiers are full wave diode bridges.
8. The circuit of claim 1 further comprising an automatic voltage regulator coupled to the second voltage regulator and to the voltage controlled oscillator.
9. The circuit of claim 1 further comprising an optical coupler for coupling the output of the one gate control circuit to the other gate control circuit.
10. The circuit of claim 1 further comprising one or more variable resistors coupled between one of the voltage regulators and the oscillator for generating a voltage signal to control the frequency or duration of the gate control signal.
11. The circuit of claim 1 wherein the gate control circuits are push pull circuits.

12. An electrical ballast and dimming switch comprising a first board for holding a ballast circuit and a second board for holding power semiconductor devices and a switch for turning lamps on and off and dimming the lamps.